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COLORADO'S SURFACE AND GROUND WATER STANDARDS AS APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS) FOR THE ROCKY FLATS PLANT CERLCA REMEDIES

A. INTRODUCTION

The State of Colorado, the United States Environmental Protection Agency (EPA), and the United States Department of Energy, (DOE) [together the Parties] are in the process of remediating contamination at the Rocky Flats site. Remediation activities are being conducted under the combined authorities of the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As part of the remedy decisions under CERCLA, the parties must identify, for each remedial action, the applicable or relevant and appropriate requirements (ARARs) which the remedy must attain.

To streamline the ARARs identification process, the parties attempted to reach consensus on a master list of all requirements which could potentially be ARARs for Rocky Flats remedies. The parties intended that this process would enable the parties to resolve disagreements once, rather than repeatedly for each remedy. Although the parties met several times in an attempt to reach consensus by March 15, 1995, no final list was agreed upon.

Among the issues still in dispute are the status of Colorado's water quality standards (CWQSs) for surface and ground water. The following discussion provides the bases for consideration of CWQSs as ARARs at Rocky Flats. This document does not present an exhaustive analysis of why CWQSs are ARARs, since many aspects of the ARARs analysis are not disputed. Instead, this document primarily refutes the objections of DOE with respect to specific ARARs.

B. CERCLA STATUTORY AND REGULATORY REQUIREMENTS FOR IDENTIFYING ARARS

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), § 121(d)2), remedial actions must attain state requirements which are more stringent than federal requirements and are:

1) promulgated and
2) either
    a) "legally applicable" or
    b) "relevant and appropriate"

Explanation of these terms is provided in Environmental Protection Agency (EPA) regulations in the National Contingency Plan (NCP) and in the preambles to the proposed and final versions of the NCP.

1. Promulgated

"Promulgated" means that the requirement must be "of general applicability" and "legally enforceable". 40 CFR 300.400(g)(4).

a. Of General Applicability

According to the Proposed NCP preamble,

> 'of general applicability' is meant to preclude consideration of state requirements promulgated specifically for one or more CERCLA sites as potential ARARs. EPA believes that Congress did not intend CERCLA actions to comply with requirements that would not also apply to other similar situations in that state.... For a state requirement to be an ARAR, it must be applicable to all remedial situations described in the requirement, not just CERCLA sites.

53 FR 51438 (preamble to Proposed NCP, December 21, 1988).

The determination of "general applicability" is necessarily a facial examination of the requirement's statutory or regulatory adoption and enforceability, and its intended application. CERCLA only requires that States identify promulgated ARARs. § 121(d)(2), 42 U.S.C. § 9621(d)(2). "CERCLA does not require states to demonstrate consistent application in order for a requirement to be considered an ARAR." 55 FR 8749. Specific questions regarding the actual implementation of requirements must be deferred until after identification of ARARs. "With respect to the [waiver] provision regarding inconsistent application of state standards [42 U.S.C. § 9621(d)(4)(E)], this provision will apply both where the standard is not of general applicability or where the standard has not been applied consistently by the State." SARA Conf. Rep. at 249. Objections to general applicability based upon implementation at other sites are merely disguised objections of "inconsistent application," and are not valid objections to ARARs identification.

After a state identifies an ARAR, it is then EPA's burden to waive ARARs for specified reasons, including inconsistent application. § 121(d)(4)(E), 42 U.S.C. § 9621(d)(4)(E). EPA specifically rejected placing the burden on the states because "imposing an up-front formal procedure on states for determining consistent application would impose a heavy administrative burden" on the states. 55 FR 8749. Standards are presumed to have been consistently applied (or in the case of new standards, intended to be consistently applied). 55 FR 8749.

When identifying ARARs, the NCP explicitly expresses a preference for state water quality standards (WQSs), particularly site-specific WQSs.

If a state has promulgated a numerical WQS that applies to the contaminant and the designated use of the surface water at a site, the WQS will generally be applicable or relevant and appropriate for determining cleanup levels, rather than an [federal water quality criteria] (FWQC). A WQS represents a determination by the State, based on the FWQC, of a level of contaminant which is protective in that surface water body, a determination subject to EPA approval.... A State numerical WQS is essentially a site-specific adaptation of a FWQC, subject to EPA approval, and, when available, is generally the appropriate standard for the specific water body, rather than a FWQC. If both [a maximum contaminant level] (MCL) and numerical State WQS exist for the same constituent where the water is designated for drinking, the State WQS should be used if it is more stringent, as required by CERCLA section 121(d)(2)(A)(ii).

53 FR 51349, 51442 (preamble discussion of 40 CFR § 300.430(e)(2), Use of State WQSs) (emphasis added).

MCLs or non-zero MCLGs generally will be relevant and appropriate standards for surface waters designated as a drinking water supply, unless the state has promulgated water quality standards (WQS) for the water body that reflect the specific conditions of the water body. However, surface water bodies may be designated for uses other than drinking water supply, and therefore an FWQC intended to be protective of such uses, such as the FWQC for consumption of fish or for protection of aquatic life, may very well be relevant and appropriate is such cases.

55 FR 8666, 8755 (preamble discussion of 40 CFR § 300.430(e)(2), Use of FWQC and WQSs) (emphasis added).

The NCP also recognizes general program goals as ARARs.

General state goals that are contained in a promulgated statute and implemented via specific requirements found in the statute or in other promulgated regulations are potential ARARs. For example, a state antidegradation statute which prohibits degradation of surface waters below specific levels of quality or in ways that preclude certain uses of that water would be a potential ARAR. Where such promulgated goals are general in scope, e.g., a general prohibition against discharges to surface waters of 'toxic materials in toxic amounts,' compliance must be interpreted within the context of the implementing regulations, the specific circumstances at the site, and the remedial alternatives being considered.

53 FR 51394, 51438 (emphasis added).

[G]eneral goals, such as nondegradation laws, can be potential

ARARs if they are promulgated, and therefore legally enforceable, and if they are directive in intent.

55 FR 8666, 8746 (emphasis added). "[O]bjective standards are not required under CERCLA for a requirement to qualify as an ARAR." United States v. Akzo Coatings of America, Inc., 949 F.2d 1409, 14442 (1991) (regarding Michigan's antidegradation law). Accordingly, both site-specific standards and general goals are ARARs as long as they are "applicable to all remedial situations described in the requirement, not just CERCLA sites." 55 FR 8746.

b. Legally enforceable

"Legally enforceable" means that the state requirement "must be issued in accordance with state procedural requirements and contain specific enforcement provisions or be otherwise enforceable under state law." 53 FR 8746.

2. Legally applicable

According to the NCP, "applicable requirements means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site." "[A]pplicable requirements are those requirements that would be legally applicable if the response action were not undertaken pursuant to CERCLA." 55 FR 8742.

In order to be legally applicable, there must exist legal authority to apply the requirement. "Jurisdiction prerequisites" are "key in the applicability determination...." 55 FR 8743. Typical jurisdictional requirements include:

1) Who, as specified by the statute or regulation, is subject to its authority;
2 The activities the statute or regulation requires, directs, or prohibits;
3) The substance or places within the authority of the requirement; and
4) The time period for which the statute or regulation is in effect.

53 FR 51436.

In short, in order for a requirement to be "applicable," the requirement must be enforceable by a regulatory body having jurisdiction to do so under the existing circumstances, were the site not a CERCLA site.

3. Relevant and appropriate

If a requirement is not "legally applicable" it may nonetheless be "relevant and appropriate." The determination of

whether a requirement is relevant and appropriate assesses "whether a requirement addresses problems or situations sufficiently similar to the circumstances of the release or remedial action contemplated, and whether the requirement is well-suited to the site, and therefore is both relevant and appropriate." 40 CFR 300.400(g)(2). "[T]he evaluation focuses on the purpose of the requirement, the physical characteristics of the site and the waste, and other environmentally- or technically-related factors." 55 FR 8743.

According to the NCP, the determination of whether a requirement is relevant and appropriate necessitates a comparison of the CERCLA remedial action and the requirement with regard to the following factors:

> (i) The purpose of the requirement and the purpose of the CERCLA action;
>
> (ii) The medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site;
>
> (iii) The substances regulated by the requirement and the substances found at the CERCLA site;
>
> (iv) The actions or activities regulated by the requirement and the remedial action contemplated at the CERCLA site;
>
> (v) Any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site;
>
> (vi) The type of place regulated and the type of place affected by the release or CERCLA action;
>
> (vii) The type and size of structure or facility regulated and the type and size of structure or facility affected by the release or contemplated by the CERCLA action;
>
> (viii) Any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resource at the CERCLA site.

40 CFR 300.400(g)(2). The site and the requirement need not be similar with regard to each factor, nor is similarity with any one factor determinative. The importance of each factor will vary at each site. "[T]he final decision is based upon best professional judgment about the situation at the site and the requirement as a whole." 55 FR 8743.

Although both "legally applicable" and "relevant and appropriate" requirements must both be "legally enforceable," "relevant and appropriate" requirements need not meet the jurisdictional requirements discussed above. Basically, as long as the requirement is enforceable against somebody under similar circumstances, the requirement is "relevant and appropriate" for the CERCLA remedial action. "[J]urisdictional prerequisites, while key in the applicability determination, are not the basis for relevance and appropriateness." 55 FR 8743.

C. PROMULGATED RADIONUCLIDE AND NON-RADIONUCLIDE SURFACE AND GROUND WATER STANDARDS AS ARARs

The following sections discuss the application of the ARARs identification process to the State's water quality standards. CERCLA and the NCP define the ARARs identification process by establishing the criteria set forth above. This identification process does not permit the interjection of additional criteria on a case-by-case basis. It does not permit collateral attacks upon the correctness of the promulgating agency's decisions during creation of the ARARs.

Each of the standards discussed below fulfill the CERCLA criteria by which ARARs are determined. Furthermore, pursuant to Section 303(c) of the Federal Water Pollution Control Act (FWPCA), 33 U.S.C. § 1313(c), EPA reviewed and approved the Big Dry Creek surface water standards for segments 1 through 5 as fulfilling the purposes and requirements. See Letter from Jack W. McGraw, Acting Regional Administrator to Sue Ellen Harrison, Colorado Water Quality Control Commission Chair, October 1, 1993. Therefore, these standards are ARARs according to the statutorily and regulatorily prescribed CERCLA ARARs identification process and are not now open to collateral attacks upon their correctness.

1. General Applicability

Preliminarily, it is important to note that rules promulgated by State agencies are, by definition, of general applicability. § 24-4-102(15) C.R.S. State surface water and ground water standards are established to protect all existing and potential future beneficial uses of State waters. §§ 25-8-202, -203, -204, -401 C.R.S.

Surface Water Standards

Without offering any details, DOE objects to site-specific surface water standards which are not associated with a use classification. This appears to be an undefined attack upon organic standards in Table 1A, 5 CCR, 1002-8, § 3.8.6. DOE also objects to State regulation of radionuclides encompassed by the Atomic Energy Act.

The Colorado Water Quality Control Act (CWQCA), § 25-8-101, C.R.S. et seq., specifically authorizes the Water Quality Control Commission (the Commission or the WQCC) to set statewide and site-specific standards. § 25-8-204(3). Such standards may apply to one or more classes of state waters. Id. The Act authorizes the Commission to regulate a wide range of pollutants, including radioactive materials. Id. at §§ 25-8-103(15) and -204(2). The Act also provides a broad range of factors upon which the Commission may base such standards. Id. at § 25-8-204(4).

The Basic Standards for Surface Waters also explicitly authorize, in promulgated regulations, authority to set site-specific standards, including those for radioactive materials and organic pollutants:

> (2) The radioactive materials in surface waters shall be maintained at the lowest practical level. ... In no case shall [they] be increased ... to exceed the following levels....
>
> (4)(b) [In determining whether to adopt site-specific radioactive materials and organic pollutants standards to apply in lieu of the statewide standards] the Commission shall ... determine whether numerical standards other than some or all of the statewide standards ... would be more appropriate for protection of the classified uses, taking into account the factors prescribed in Section 25-8-204(4), C.R.S. and in Section 3.1.7.

Section 3.1.11 of 6 CCR 1002-8, BASIC STANDARDS APPLICABLE TO SURFACE WATERS OF THE STATE. The Statement of Basis and Purpose, 6 CCR 1002-8, § 3.1.22(D) (regarding § 3.1.11(4) explains:

> Section 3.1.11(4) clarifies the Commission's ability to adopt site-specific standards to apply in lieu of the statewide standards where appropriate. One such example where this might be appropriate [is] where a more restrictive aquatic life standard may be appropriate because adverse human health impacts from fish consumption are demonstrated to be a potential problem on a site-specific bases. Rather than attempt to anticipate all potential factual justifications for different site-specific standards, the Commission has determined that it is most appropriate simply to refer to the standard statutory and regulatory criteria for such determinations.

Rather than not being associated with a particular use, the site-specific table values in fact are associated with <u>all</u> uses within the segments to which they apply. The organics standards in Table 1a were promulgated for the very reason the Commission suggested Section 3.1.11(4) might be appropriate: based upon the Commission's finding that they are necessary "to protect humans from health risk posed by consuming both fish and water." <u>Statement of Basis, Specific Statutory Authority, and Purpose</u>, 5 CCR 1002-8, § 3.8.30(3). In fact, "the standards [for atrazine and simazine] are based on a proposed MCL for atrazine and a current EPA Health Advisory for simazine.... <u>Counsel for the DOE conceded the appropriateness of the proposed standards for these two constituents during the Commission's hearing</u>." <u>Id</u>. (emphasis added). As stated in the NCP, site-specific standards are tailored to the specific needs of the site, and are preferred ARARs for water quality.

With regard to radionuclides, the Basic Standards are promulgated regulations implementing a specific legislative goal. The CWQCA explicitly mandates that "that there will be no significant pollution resulting [from discharged, deposited, or disposed radioactive waste] or that ... there is no significant migration." § 25-8-506, C.R.S. The general legislative goal is implemented through specific regulations, including § 3.1.11(2) and (4)(b), which authorize maintenance of ambient concentrations. Therefore, §§ 3.1.11(2) are also ARARs.

This general goal to limit radioactive materials to their lowest practical level was again promulgated in the site-specific standard as well. The site-specific narrative standard requires that "[T]he radionuclides listed ... shall be maintained at the lowest practical level ...." 5 CCR 1002-8, § 3.8.6, Table 2. The site-specific standards also state that "in no event shall they be increased ... to exceed the site specific numeric standards. Id. The Commission explained in the Statement of Basis and Purpose:

> For gross alpha, gross beta, plutonium, americium, tritium and uranium, standards are based on existing ambient quality .... [T]he Commission believes it is appropriate to limit radionuclides in state waters to their lowest practical level, to minimize environmental exposure to such constituents.

Statement of Basis and Purpose, 6 CCR 1002-8 § 3.8.30,(3).

The statewide and site-specific Rocky Flats Big Dry Creek surface water standards for radionuclides and organics are, therefore, derived through statutory authority as well as through the authority of the promulgated regulations in Sections 3.1.11(2), and (4). The site-specific standards also satisfy specific legislative goals and their associated promulgated implementing regulations. These implementing regulations, as well as the final site-specific standards, would apply to any activities, not just to CERCLA remediation, and are therefore of general applicability. Accordingly, the general goal to limit radionuclides expressed in the CWQCA and the Basic Standards are ARARs, as are the site-specific narrative and numeric radionuclide standards.

Ground Water Standards

DOE has also objected to groundwater standards. Unfortunately, as of the date of this document, DOE's objections have not been set forth with sufficient clarity to fully understand them. The objections appear, however, to be based largely upon a mistaken understanding of the CERCLA ARARs analysis, rather than upon legitimate defects in the standards themselves. Nevertheless, the following discussion is provided in an attempt to curtail further confusion and disagreement with respect to the standards at issue.

DOE objects that site-specific groundwater standards have been inconsistently applied. DOE also objects to the site-specific standards for atrazine and simazine as not "generally applicable" based on comparisons with other sites. DOE also objects, without explanation, that standards for AEA-regulated radionuclides "do not meet the general applicability/promulgated test and/or enforceability criteria."

As discussed above in the section explaining the CERCLA ARARs identification process, DOE's arguments regarding "general applicability" are largely misplaced. DOE's arguments that site-specific groundwater standards are not of general applicability are also erroneous. The CWQCA, § 25-8-101, C.R.S. et seq., specifically authorizes the Water Quality Control Commission to set statewide and site-specific standards. § 25-8-204(3). Such standards may apply to one or more classes of state waters. Id. The Act authorizes the Commission to regulate a wide range of pollutants, including radioactive materials. Id. at §§ 25-8-103(15) and -204(2). The Act also provides a broad range of factors upon which the Commission may base such standards. Id. at § 25-8-204(4).

Pursuant to the statutory and regulatory authority set forth above, the Commission promulgated site-specific groundwater regulations. 5 CCR 1002-8, § 3.12.7 et seq. These regulations include standards for radionuclides and organic pollutants, including atrazine and simazine. § 3.12.7(1)(c)(ii). The application of these standards is not restricted to specific discharges or dischargers; these standards apply to any activities impacting the identified groundwaters. The Commission explained in the Statement of Basis and Purpose that it found these standards necessary to protect surface waters. Statement of Basis, Specific Statutory Authority, and Purpose (1991 Rocky Flats Hearing), 5 CCR 1002-8, § 3.12.10.

With regard to radionuclides, DOE's objections are also incorrect. The Basic Standards are promulgated regulations implementing a specific legislative goal. The CWQCA explicitly mandates that "that there will be no significant pollution resulting [from discharged, deposited, or disposed radioactive waste] or that ... there is no significant migration." § 25-8-506, C.R.S. The general legislative goal is implemented through specific regulations, including the Basic Standards for ground water, set forth at 5 CCR 1002-8, §§ 3.11.0, et seq. These standards include specific statewide standards for radionuclides which apply to all waters unless site-specific standards are selected. § 3.11.5(C).

In addition to the statutory authority for setting site-specific standards and for regulating radionuclides, site-specific radionuclide standards are also explicitly authorized in promulgated regulations:

(2) [In determining whether to adopt site-specific standards for radioactive materials and organic pollutants to apply in lieu of the statewide standards] [t]he Commission shall] determine whether numerical site-specific standards other than some or all of the statewide standards ... would be more appropriate for protection of the classified uses, taking into account the factors prescribed in Section 25-8-204(4), C.R.S., and in Section 3.11.4.

Section 3.11.5(D) of 6 CCR 1002-8, GROUND WATER QUALITY STANDARDS.

The state-wide and site-specific Rocky Flats groundwater standards for radionuclides and organics are derived through the authority of the statutory and promulgated regulatory sections. The standards satisfy both specific legislative goals for protection of surface and groundwater, and their associated promulgated implementing regulations. These statewide standards, as well as the implementing regulations and final site-specific standards, would apply to any activities, not just to CERCLA remediation, and are therefore of general applicability. Accordingly, the statewide and site-specific standards for radioactive materials and organic pollutants are ARARs.

2. Legally enforceable

The CWQCA contains general prohibitions, inter alia, against injury to the beneficial uses of State waters, against untreated discharges of pollutants or creation of nuisances in State waters, against the discharge of any pollutants into State waters from a point source without a permit. See, e.g., §§ 25-8-102, -501 C.R.S. The Division has broad authority to investigate and take action for violations of statutory provision of the Act or the regulation issued or promulgated by the Commission. §§ 25-8-301(1), -302(1)(a), -308, -308, -601(1), and -604 to -610 C.R.S.

Groundwater Standards

The State is not preempted nor precluded from enforcing its groundwater standards. While State authority to regulate groundwater arises independent of the federal Clean Water Act (CWA), the CWA sovereign immunity provision nonetheless applies. That provision states: "[e]ach department, agency, or instrumentality of the ... Federal Government ... shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity." § 313(a), 42 U.S.C. § 1323(a). This waiver of sovereign immunity is not limited to surface water and includes requirements respecting ground water quality, the regulation of which is expressly considered by the CWA. See 42 U.S.C. §§ 1252(a), 1354(a)(5), 1268(c)(10)(B), 1282(b)(2), 1314(a)(1) and (2), 1329(b)(2)(A), 1329(h)(5)(D), and 1329(i)(1).

Groundwater standards are also implicitly included within the waiver of sovereign immunity because they are necessary to protect surface waters. The connection between the surface water and groundwater standards at Rocky Flats was explained by the Commission in 1991: "It is appropriate to apply the surface water quality standards for Woman Creek and portions of Walnut Creek ... to the shallow aquifers at Rocky Flats because they contribute water to those streams...." 5 CCR 1002-2, § 3.12.10 Statement of Basis, Specific Statutory Authority, and Purpose (1991 Rocky Flats Hearing).

Radionuclide standards

a. Preemption

One of the leading cases addressing the relationship between the AEA and other statues is Train v. Colorado Public Interest Research Group (COPIRG), 426 U.S. 1 (1976). In Train, COPIRG attempted to force the EPA to include discharge limits in the Rocky Flats NPDES permit for radionuclides subject to the AEA. The Supreme Court held that EPA could not enforce surface water discharge limits at Rocky Flats for byproduct or special nuclear materials because the regulation of these materials is preempted by the AEA. The Train court reasoned that the CWA was not intended to alter the regulatory scheme of the AEA.

In all AEA cases reviewed, it is apparent that each of the facilities in question was operating at the time, unlike Rocky Flats, which is now inactive and undergoing remediation. Both the AEA § 2021 and the State's 1968 agreement with the AEC, as amended, Agreement Regarding Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State, 33 FR 2400 (January 31, 1986) [hereinafter the Agreement] grant to Colorado authority over byproduct material, source material, and special nuclear material in quantities not sufficient to form a critical mass. Both also retain authority within the federal government to regulate the construction and operation of any production or utilization facility. Neither the AEA nor the Agreement discuss, or include within the AEA, facilities which are inactive or undergoing remediation. Also, both the AEA and the Agreement do include provisions pertaining to disposal of radioactive materials from active facilities, and both retain federal authority over certain types of disposal of those materials. However, federal regulation of releases from waste produced by a facility which is inactive or undergoing remediation does not have the same preemptive effect as federal regulation of wastes from active facilities. Obviously, compliance with state regulation of releases from waste at inactive facilities would not interfere with facility construction and operation to the same degree as would as compliance with state regulation of releases from waste at active facilities.

Because the AEA does not include regulation of radioactive materials from facilities undergoing remediation, the logic of Train does not apply to State authority under the CWA and CWQCA for regulation of surface water. Furthermore, Train did not address preemption of regulation of radionuclides in groundwater, which authority exists separate from the CWA. C.R.S., Title 25, Article 8, Part 2. This authority includes setting standards for all radioactive material, whether or not they are encompassed by the AEA, since the definition of "pollutant" in Section 25-8-103(15) includes all radioactive material.

b. Delegation to Colorado of AEA authority

Under the Agreement Regarding Discontinuance of Certain Commission Regulatory Authority and Responsibility Within the State, 33 FR 2400 (January 31, 1986), the State was granted authority over some AEA-regulated activities involving quantities of byproduct material, source material, and special nuclear material insufficient to form a critical mass. This provides certain areas of State jurisdiction over AEA-regulated radioactive materials potentially significant to CERCLA remediation at Rocky Flats.

The 1968 Agreement with the AEC, as amended, transferred certain regulatory authorities from the AEC to the State. The AEC subsequently went through several changes and the licensing and enforcement authority it retained in 1968 is now held by the Nuclear Regulatory Commission (NRC). Pursuant to Reorganization Act No. 3 of 1970, the authority retained by the AEC to set general environmental standards for concentrations of radioactive materials outside the boundaries of facilities was transferred to the EPA, and the AEC authority to include those standards in licenses and to enforce them was transferred to the NRC.

The Agreement's transfer of authorities is governed by § 274 of the AEA, 42 U.S.C. § 2021. Included among the provisions in § 2021 permitting delegation of authority to states are the following provisions:

> (b)".... During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards."
>
> (d) The Commission shall enter into an agreement under subsection (b) of this section with any State if --
>
> (1) The Governor of that State Certifies that the State has a program for the control of radiation hazards adequate to protect the public health and safety with respect to materials within the State covered by the proposed agreement....

(g) Radiation Standards. The Commission is authorized and directed to cooperate with the States in the formulation of standards for protection against hazards of radiation to assure that State and Commission programs for protection against hazards of radiation will be coordinated and compatible.

§ 2021. Section 2021 and the Agreement provide for federal discontinuance and transfer to the State of authorities found in 42 U.S.C.:

§§ 2071-2078, regarding the transfer, receipt, delivery, acquisition, possession, ownership, import, and export of special nuclear material in quantities insufficient to form a critical mass, or its use for:

(1) research and development activities pursuant to § 2051;
(2) research and development activities or medical therapy pursuant to § 2134;
(3) industrial and commercial purposes pursuant to § 2133; and
(4) other uses as the commission deems appropriate.

§§ 2091-2099, regarding the transfer, receipt, delivery, possession, ownership, import, and export of source material or its use for:

(1) research and development activities pursuant to § 2051;
(2) research and development activities or medical therapy pursuant to § 2134;
(3) industrial and commercial purposes pursuant to § 2133; and
(4) other uses as the commission deems appropriate.

§§ 2111, regarding the foreign distribution, or domestic transfer, receipt, manufacture, production, transfer, acquisition, ownership, possession, import, export of byproduct material or its use for research or development, medical therapy, industrial uses, agricultural uses, or such other useful applications as may be developed, in accordance with:

§ 2112 (foreign distribution not inimical to the common defense and safety); or
§ 2114.a(1) (appropriate to protect the public health and safety and the environment from radiological and nonradiological hazards);
§ 2114.a(2) (applicable general standards promulgated by the Administrator or the Environmental Protection Agency);
§ 2114.a(3) (general Commission requirements for hazardous materials comparable to those under the Solid Waste Disposal act);

§ 2113, regarding requirements in licenses for activities relating to source material or byproduct material which results in the production of any byproduct material, that title to such material and the land which is used for disposal be transferred to the United States or (at the option of the State in which the licensed activity occurs) to the State, and that such State shall maintain such material and land in such manner as will protect the public health, safety, and the environment; and

§ 2201, regarding general provisions. These include authority to:

> (b) establish ... such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material ... to ... to protect or to minimize danger to life or property;
> ...
> (i) prescribe such regulations or orders as it may deem necessary ... (3) to govern any activity authorized pursuant to this Act, including standards governing the design, location, and operation of facilities ... in order to protect health and minimize danger to life or property.

§ 161, 42 U.S.C. § 2201.

States also have the responsibility, either alone or through a compact with other states, to provide for the disposal of low-level radioactive wastes. 42 U.S.C. § 2021.c. These wastes would include the Class A, B, or C wastes, as defined in 10 CFR 61.55, which would include radionuclides encompassed by the State's surface and ground water standards. Proper disposal may include establishing and monitoring compliance with groundwater standards. Regardless of whether the waste source is a federal agency, wastes generated by the federal government and disposed of in non-federal disposal sites are subject to the same conditions, regulations, and requirements as non-federally generated wastes. § 2021d(b)(1)(B).

With the exception of activities soley involving source materials, the above provisions grant authority to states over activities involving material which may include each of the AEA-regulated radionuclides for which the State has adopted surface and ground water standards. Sections 2021 and 2201 clearly include authority over the formulation of standards for protection of radiation hazards.

The Train Court noted, in footnote 20, that in addition to authorizing discharge limits, the AEA also authorized the AEC to establish "limits on radiation ... concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material." Id. at 24 (citing 5 U.S.C. § 309,

Reorganization Plan No. 3 of 1970, § 2(a)(6). This statutory framework appears to encompass WQSs both for surface and ground water.

The 1968 Agreement, as amended, does not specify which agency within the State has standard setting, licensing and enforcement authority and which agency has authority to set general environmental standards for concentrations of radioactive material outside the boundaries of a facility. However, the State has elected to instill the authority to create water quality standards for radionuclides within the Water Quality Control Commission. C.R.S., Title 25, Article 8, Part 2. This authority includes setting standards for all radioactive material, whether or not they are encompassed by the AEA, since the definition of "pollutant" in Section 25-8-103(15) includes all radioactive material.

The EPA and the NRC have confirmed that Agreement states possess authority to set general environmental standards for concentrations of radioactive material both within and beyond facility boundaries. In Suggested State Regulations for Control of Radiation, prepared by the Conference of Radiation Control Program Directors, NRC, EPA, and the U.S. Department of Health and Human Services, water quality standards are suggested. Part D and Appendix A to Part D, Concentrations In Air And Water Above Natural Background. The suggested regulations include both standards for discharges into sanitary sewers and ambient standards in areas beyond facility boundaries. Section D.303, Disposal by Release Into Sanitary Sewage Systems and Part D App. A, Table I; and Section D.106, Concentrations Of Radioactivity In Effluents To Unrestricted Areas and Part D App. A, Table II. Included among the specified radionuclides are various forms of Americium, Cesium, Plutonium, and Uranium. Part D App. A.

The situations in Train and Northern States did not address Agreement state authority to promulgate water quality standards pursuant to the AEA. Both cases involved discharge limits under authority of the CWA. In Train, EPA's authority was limited by the fact that EPA possesses only a portion of the AEA standard setting authority - the NRC retains authority within facility boundaries. The discharges were occurring within the Rocky Flats boundaries during active operations. In Northern States, the court specifically noted that Minnesota was not an Agreement state. 447 F.2d 1143, 1148-49.

The State's Agreement, and Section 2021 which authorizes such agreements, both retain within the federal government only authority over "construction and operation of production or utilization facilities." Agreement, Art. II.A.1., and § 2021. No provision in the AEA or the Agreement retains exclusive federal authority over production and utilization facilities which are inactive or undergoing remediation. DOE's self-regulation provision is no bar to state regulation of radionuclides at Rocky

Flats. This self-regulation provision also is limited to "the construction or operation of facilities under contract with and for the account of the [DOE]." 42 U.S.C. § 2140(a). This provision similarly does not encompass the remediation of facilities.

3. Legally applicable

The answer to whether the CWQSs meet the test of legal applicability is based upon the jurisdictional factors set forth at 55 FR 8743 and outlined above. The statewide and site-specific standards for surface and ground water clearly are applicable to Rocky Flats since the area to which they apply encompasses the plant.

4. Relevant and Appropriate

The answer to whether the CWQSs meet the test of relevance and appropriateness in order to be Relevant and Appropriate Requirements turns on the factual/physical criteria of 40 CFR 300.400(g)(2) identified above.

Colorado does have authority over state groundwater. Colorado also has authority over certain activities which involve the radionuclides in question and which could result in their release. Therefore, any lack of authority to impose certain requirements upon Rocky Flats would not preclude their incorporation as ARARs. Statewide standards need not satisfy the jurisdictional factors set forth at 55 FR 8743 and outlined above in order to be "relevant and appropriate," because they nonetheless apply to dischargers other than Rocky Flats. Likewise, since the site-specific surface and ground water standards apply beyond the facility boundary and/or to potential dischargers other than Rocky Flats, these standards need not satisfy the jurisdictional factors either.

D. CONCLUSIONS

1. Colorado's site-specific surface water WQSs, including organic standards, are both "generally applicable" and "legally enforceable." Explicit statutory and regulatory provisions generally applicable throughout the State authorize the promulgation and enforcement of site-specific standards based upon a broad range of factors. Such standards may be designated to apply to all or some uses within that site. These standards are ARARs, contrary to DOE's undefined objections.

2. Colorado' statewide and site-specific surface water WQSs for all radionuclides constitute ARARs. Explicit statutory and regulatory provisions generally applicable throughout the State authorize the promulgation and enforcement of these standards based upon a broad range of factors. These factors include protection of human health and the environment and implementation of the statutory goal of limiting pollution resulting from, and migration of, radioactive materials in State waters. These standards include both numeric standards and narrative standards requiring that

radioactive materials be kept to their lowest practical level. These standards are ARARs, contrary to DOE's objections.

3. Colorado's site-specific groundwater WQSs, including those for atrazine and simazine, constitute ARARs. Explicit statutory and regulatory provisions authorize the promulgation and enforcement of these standards based upon a broad range of factors. Therefore, these standards are of general applicability and legally enforceable. These standards are ARARs, contrary to DOE's objections

Also, these standards have been consistently applied within the State; however, this document does not fully discuss this issue because it is not relevant to the identification of ARARs and has been mistakenly interjected into the ARARs analysis by DOE. Furthermore, inconsistent application of state requirements is a position which parties other than the State bear the burden of proving.

4. Colorado' statewide and site-specific groundwater WQSs for all radionuclides constitute ARARs. Explicit statutory and regulatory provisions generally applicable throughout the State authorize the promulgation and enforcement of these standards based upon a broad range of factors. These factors include protection of human health and the environment and implementation of the statutory goal of limiting pollution resulting from, and migration of, radioactive materials in State waters. These standards are ARARs, contrary to DOE's objections.

5. Colorado' statewide and site-specific surface and ground water standards fulfill the NCP jurisdictional criteria and are therefore "legally applicable" to Rocky Flats. To the extent these applicable standards are questioned on the basis of their enforceability at Rocky Flats, they are nevertheless relevant and appropriate because they apply beyond the facility boundary and/or to potential dischargers other than Rocky Flats. As such, these standards need not satisfy the NCP's jurisdictional factors in order to be ARARs.

6. Colorado is not preempted by the Atomic Energy Act from promulgating and enforcing its statewide and site-specific radionuclide WQSs, since the AEA does not preemptively regulate inactive facilities undergoing remediation. To the extent that the AEA would encompass such standards, the AEA provisions authorizing state agreements, Colorado's 1968 Agreement with the AEC, and the CWQCA and its implementing regulations provide Colorado with clear authority to promulgate and enforce its WQSs.